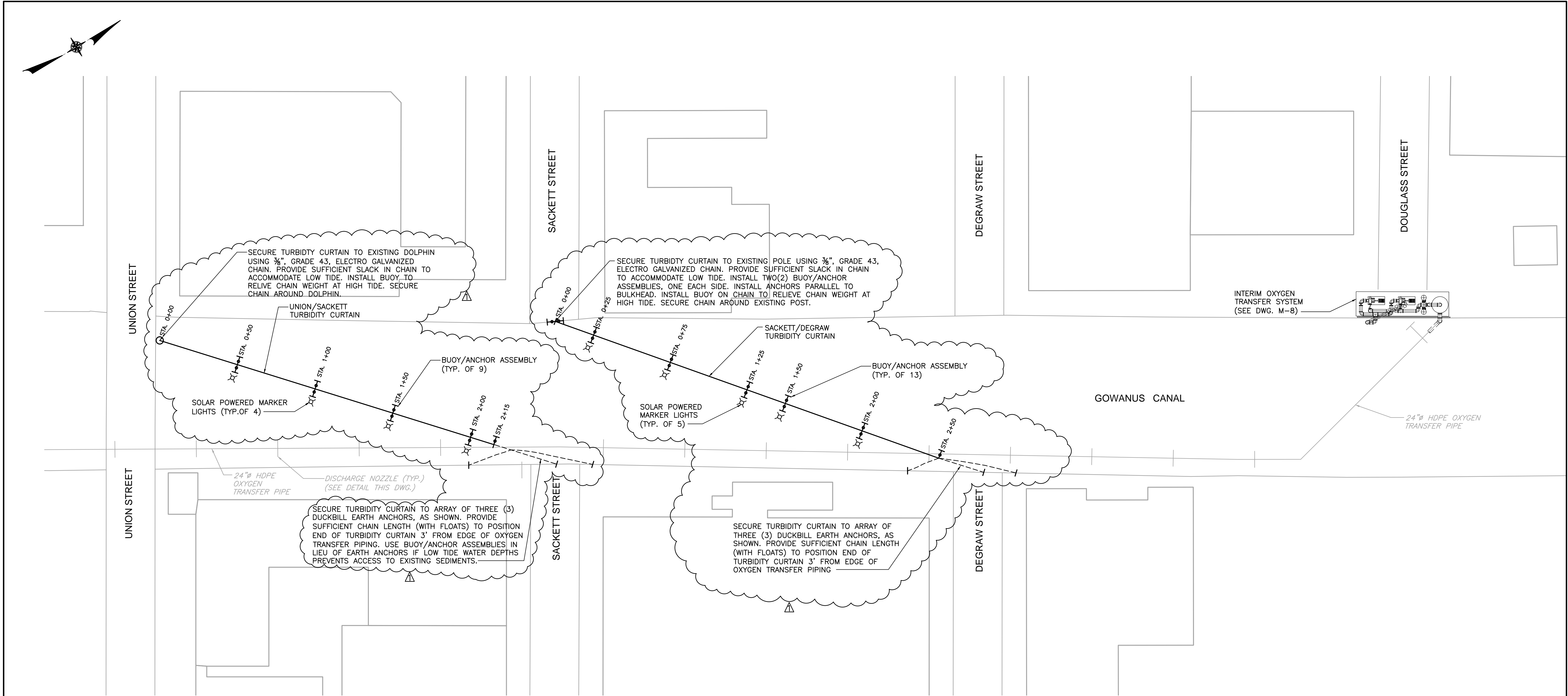






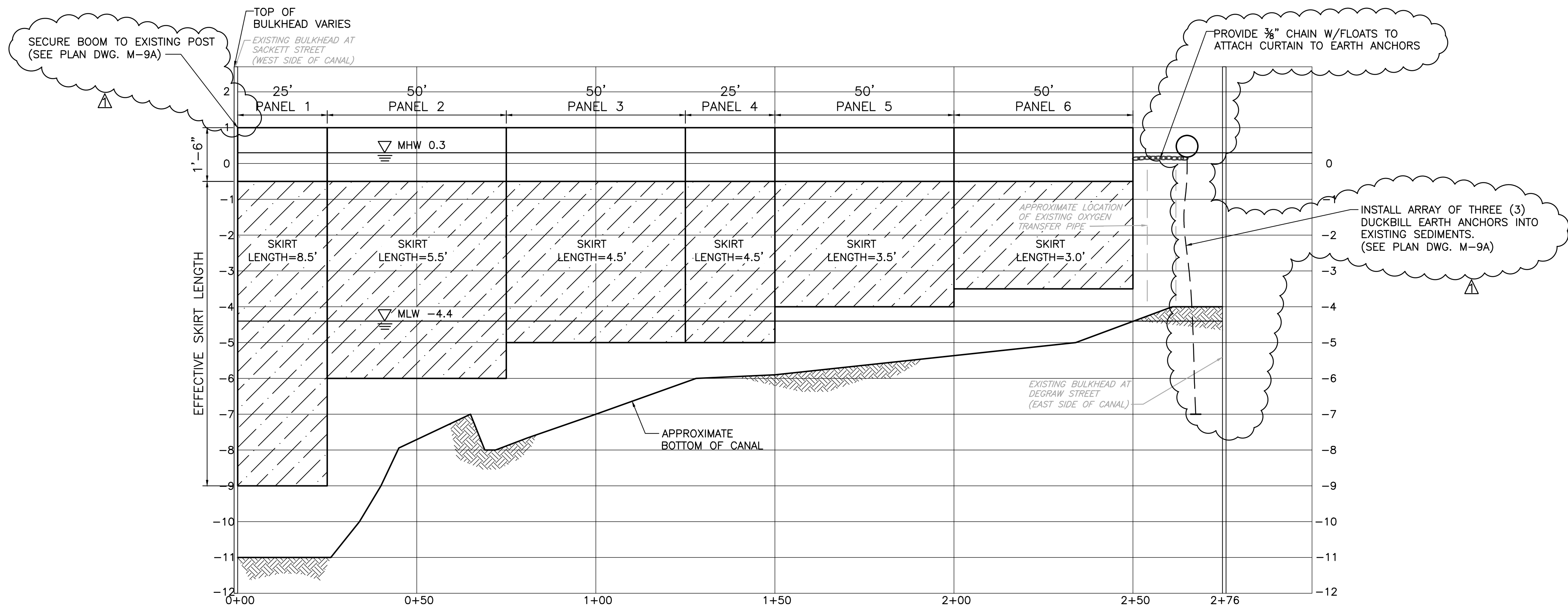
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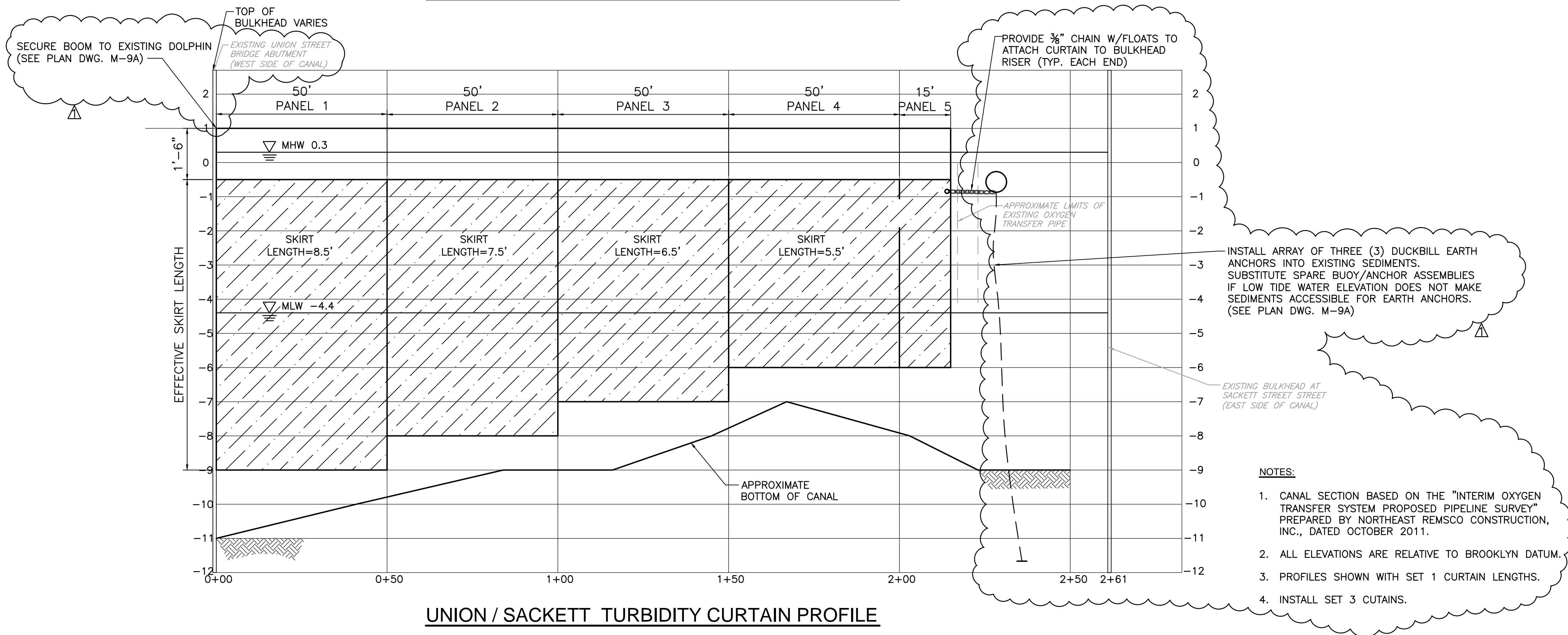
PLAN

SCALE: 1"=30'





				DESIGNED <u>E.J.R.</u>		<p>SCALE</p> <p>1" = 30'</p> 	 <p><b>Dvirka and Bartilucci</b> CONSULTING ENGINEERS A DIVISION OF WILLIAM F. COSULICH ASSOCIATES, P.C.</p>	APPROVED FOR THE CITY OF NEW YORK			<p>CITY OF NEW YORK</p> <p>DEPARTMENT OF ENVIRONMENTAL PROTECTION</p> <p>BUREAU OF ENGINEERING DESIGN AND CONSTRUCTION</p> <p>DIVISION OF WASTEWATER AND WATER</p> <p>INFRASTRUCTURE AND SUPPORT</p> <p>CAPITAL PROJECT WP-169 CITY WIDE CSO FACILITIES</p>	<p>CONTRACT NO. CSO-GC-G</p> <p>GOWANUS FACILITIES UPGRADE</p> <p>FLUSHING TUNNEL PUMPING SYSTEM</p> <p>SEDIMENT CONTROL PLANS</p> <p>MECHANICAL</p>	DATE <u>NOV. 2013</u>		
				DRAWN <u>A.R.S.</u>				DENZIL TAFFE, P.E. Executive Project Manager					DATE <u>NOV. 2013</u>		
				CHECKED <u>M.M.</u>											
				ENGINEER <u>G.M.B.</u>											
				GROUP LEADER <u>D.F.K.</u>											
NO.	DATE	REVISION	BY					KEVIN CLARKE, P.E. Chief-Division Of Wastewater And Water Infrastructure And Support							DWG. NO. <u>M-9A</u>
	11/15/2013	DSDC 50R1	EJR												
	11/7/2013	DSDC 50R	EJR												
	11/4/2013	DSDC 50	EJR												



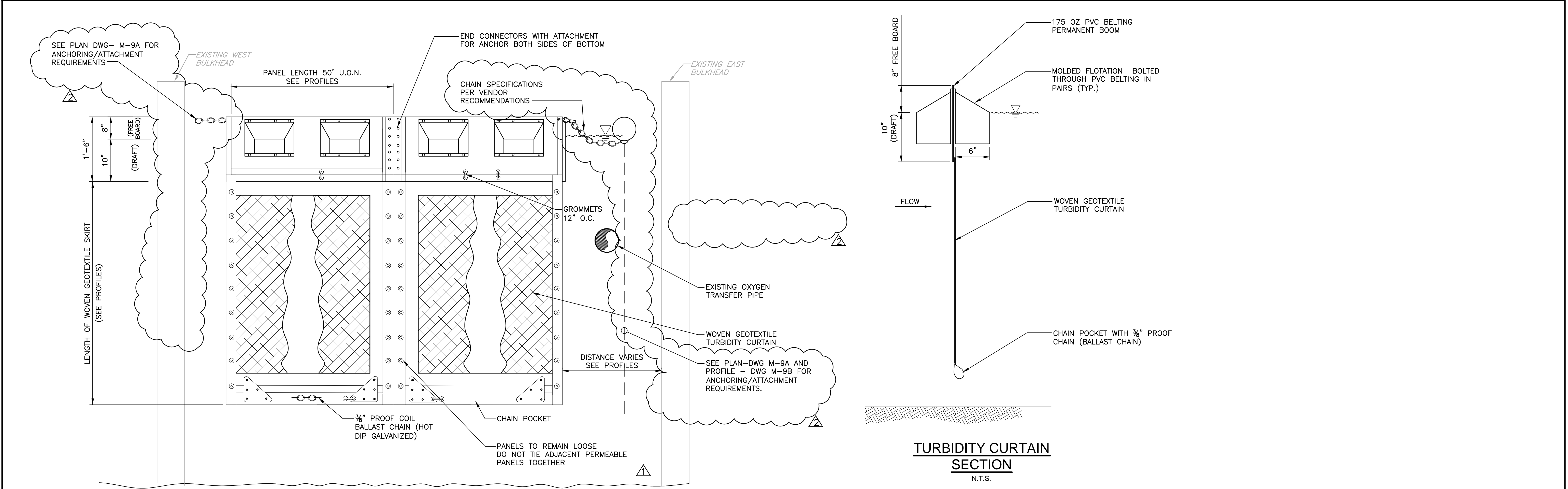
SACKETT / DEGRAW TURBIDITY CURTAIN PROFILE



UNION / SACKETT TURBIDITY CURTAIN PROFILE

				DESIGNED E.J.R.				APPROVED FOR THE CITY OF NEW YORK DENZIL TAFFE, P.E. Executive Project Manager		CITY OF NEW YORK DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF ENGINEERING DESIGN AND CONSTRUCTION DIVISION OF WASTEWATER AND WATER INFRASTRUCTURE AND SUPPORT CAPITAL PROJECT WP-169 CITY WIDE CSO FACILITIES	CONTRACT NO. CSO-GC-G GOWANUS FACILITIES UPGRADE FLUSHING TUNNEL PUMPING SYSTEM SEDIMENT CONTROL PROFILES MECHANICAL	DATE NOV. 2013 SHEET XX OF XX DWG. NO. M-9B							
				DRAWN A.R.S.															
				CHECKED M.M.															
				ENGINEER G.M.B.															
NO.	DATE	REVISION	BY	GROUP LEADER D.F.K.															
	11/15/2013	DSDC 50R1	EJR																
	11/7/2013	DSDC 50R	EJR																
	11/4/2013	DSDC 50	EJR																

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**TURBIDITY CURTAIN DETAILS**  
N.T.S.



				DESIGNED <u>E.J.R.</u>		SCALE	 <b>Dvirka and Bartilucci</b> CONSULTING ENGINEERS A DIVISION OF WILLIAM F. COSULICH ASSOCIATES, P.C.	APPROVED FOR THE CITY OF NEW YORK		CITY OF NEW YORK	CONTRACT NO. CSO—GC—G	DATE <u>NOV. 2013</u>
				DRAWN <u>L.V.G.</u>		AS SHOWN		DENZIL TAFFE, P.E. Executive Project Manager		DEPARTMENT OF ENVIRONMENTAL PROTECTION	GOWANUS FACILITIES UPGRADE	SHEET <u>XX</u> OF <u>XX</u>
				CHECKED <u>M.M.</u>		0  1		KEVIN CLARKE, P.E. Chief—Division Of Wastewater and Water Infrastructure And Support		BUREAU OF ENGINEERING DESIGN AND CONSTRUCTION	FLUSHING TUNNEL PUMPING SYSTEM SEDIMENT CONTROL DETAILS MECHANICAL	DWG. NO. <u>    </u> M-9C
				ENGINEER <u>G.M.B.</u>		SCALE IN INCHES				DIVISION OF WASTEWATER AND WATER INFRASTRUCTURE AND SUPPORT		
				GROUP LEADER <u>D.F.K.</u>						CAPITAL PROJECT WP—169 CITY WIDE CSO FACILITIES		
	11/15/2013	DSDC 50R1	EJR									
	11/7/2013	DSDC 50R	EJR									
	11/4/2013	DSDC 50	EJR									
NO.	DATE	REVISION	BY									

TURBIDITY CURTAIN SPECIFICATIONS

1.PERMANENT BOOM

- FREEBOARD – 8"
- DRAFT – 10"
- 175 OUNCE, PVC COATED POLYESTER BELT WITH UV AND MARINE INHIBITORS, 18 INCHES WIDE.
- LENGTHS AS SHOWN IN PROFILES.
- END CONNECTIONS – 18" ASTM SERRATED SLIDE UNIVERSAL CONNECTORS WITH ZINC ANODES
- ANCHOR POINTS – HANDLES ON EACH END CONNECTOR, BOTH SIDES OF BELT.
- FLOTATION – MOLDED POLYETHYLENE UV INHIBITED SHELL FILLED WITH COAST GUARD APPROVED MARINE GRADE CLOSED CELL FOAM. FLOTATION ATTACHED TO BELTING IN PAIRS WITH THROUGH BOLTING. FLOATS POSITIONED 3' – 0" ON CENTER. FLOATS SHALL BE SPILLMASTER SUPERFLEX FLOAT. GROMMETS LOCATED EVERY 1' TO ATTACH TURBIDITY CURTAIN TO LOWER EDGE OF BOOM.
- COLOR – BLACK BELTING WITH ORANGE FLOTATION
- PERMANENT BOOM AS MANUFACTURED BY PARKER SYSTEMS INC., 866-472-7537, OR APPROVED EQUAL.

2.PERMEABLE CURTAIN – TYPE I

- WOVEN GEOTEXTILE PRODUCED FROM SLIT FILM POLYPROPYLENE, BELTECH 200 AS MANUFACTURED BY BELTON INDUSTRIES OR APPROVED EQUAL. GEOTEXTILE PANELS FURNISHED BY PARKER SYSTEMS, INC.
- APPARENT OPENING SIZE (AOS) – 30 SIEVE – MINIMUM AVERAGE ROLL VALUE (MARV) ASTM D-4751.
- WATER FLOW RATE – 4 GALLONS PER MINUTE PER SQUARE FOOT (MARV) ASTM D-4491.
- GROMMETS EVERY 1' –0" TO CONNECT TO LOWER EDGE OF PERMANENT BOOM AND FOR END TO END CONNECTIONS. REINFORCE EDGES AS REQUIRED.
- CHAIN POCKET ALONG LOWER EDGE TO RECEIVE BALLAST CHAIN.
- BALLAST CHAIN – 3/8 INCH PROOF COIL CHAIN – HOT DIP GALVANIZED, WITH END CONNECTORS, SHACKLES, COUPLINGS AS REQUIRED.
- SKIRT LENGTH AS SHOWN IN PROFILES, PANEL LENGTHS AS SHOWN IN PROFILES.
- SECURE TURBIDITY CURTAIN TO BOOM WITH POLY ROPE LACED THROUGH GROMMETS.
- ADJACENT ENDS OF PERMEABLE CURTAINS TO REMAIN LOOSE, NOT TIED END TO END.

3.FIBERGLASS BULKHEAD RISER–NOT REQUIRED

4.MARKER LIGHTS

- THE PENDULUM IS MADE OF 6061-T6
- ¾ INCH SCHEDULE 40 PVC PIPE WITH A ROTO-MOLDED, FOAM FILLED, SOLID POLYETHYLENE FLOAT DESIGNED FOR LONG LASTING USE IN ALL WEATHER CONDITIONS.
- PROVIDE A LIGHT ASSEMBLY WITH AMBER LED WITH ONE 200 HOUR RESERVE BATTERY AND A SOLAR PANEL RECHARGING SYSTEM.
- LIGHT TO OPERATE ON 1 SECOND DUTY CYCLE, 0.3 SECONDS ON AND 0.7 SECONDS OFF.
- LIGHT POSITIONED 1 METER ABOVE THE WATER LINE.
- SECURE TO BOOM WITH NYLON LANYARD AND STAINLESS STEEL SNAP HOOK.
- LEAD BALLAST SECURED IN BASE OF BUOY PENDULUM.
- WARRANTED FOR THREE YEARS.
- PERMANENT MARKER LIGHTS AS MANUFACTURED BY PARKER SYSTEMS, INC. OR APPROVED EQUAL.

5.ANCHORS AND BUOYS

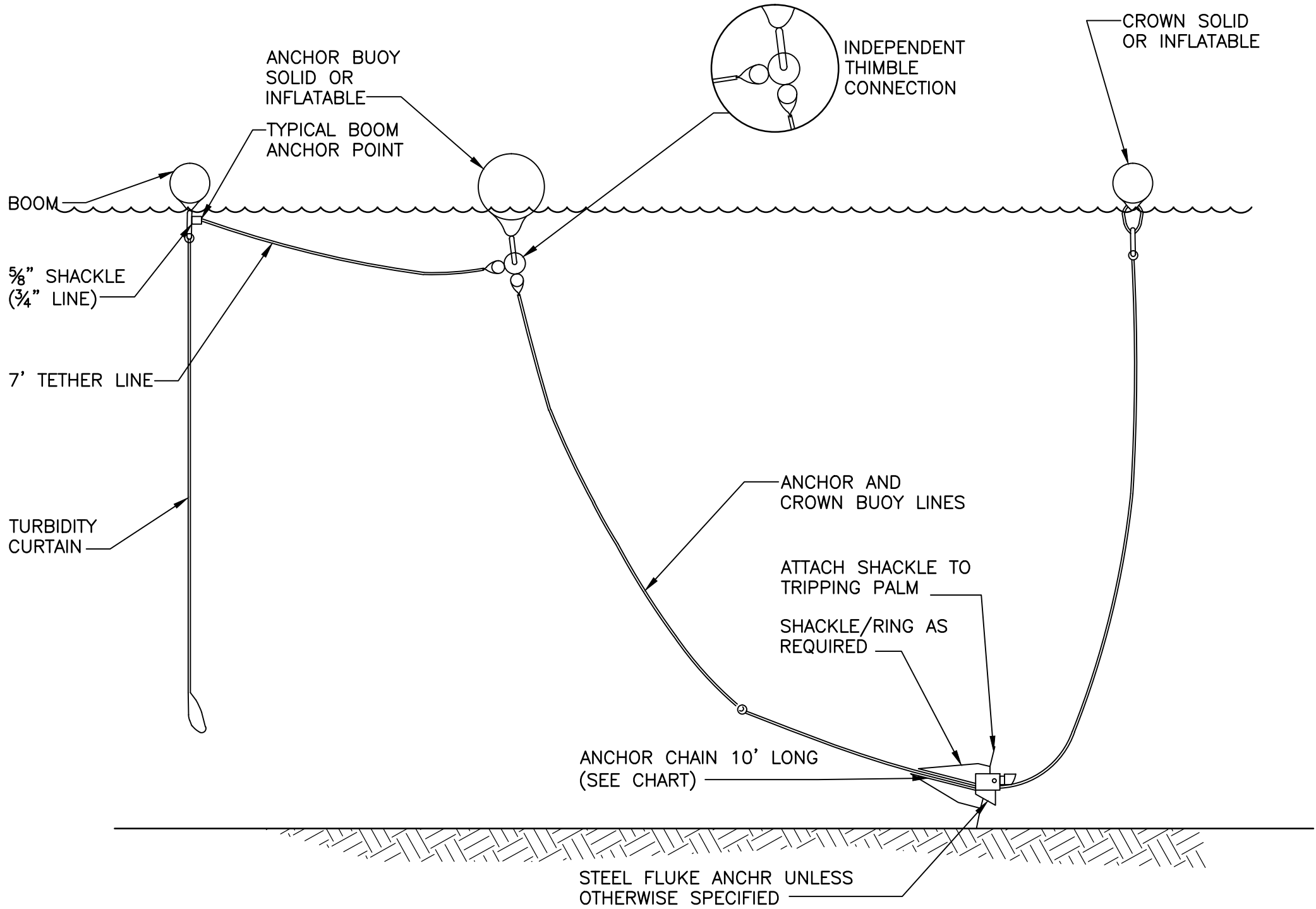
- PROVIDE ANCHORS AND BUOYS IN SETS.
- SECURE ANCHORS AND BUOYS TO ATTACHMENT POINTS AT EACH SEAM (JOINT) IN TURBIDITY CURTAIN.
- PROVIDE 65 POUND ANCHORS WITH LINES AND CHAINS TO MATCH. SEE DETAIL.
- PROVIDE ANCHORS AND BUOYS AS FURNISHED BY PARKER SYSTEMS, INC. OR APPROVED EQUAL.
- PROVIDE SIX(6) 3,000 POUND PULL OUT CAPACITY, DUCK BILL EARTH ANCHORS WITH CHAINS, CABLES, CONNECTORS, ETX. TO SECURE BOOM ENDS, AS NECESSARY. INSTALL IN SETS OF THREE ANCHORS,

6.SPARES

- PROVIDE TWO (2) 50' LENGTHS AND ONE (1) 25' LENGTH OF BOOM AS SPARES. EACH SECTION TO BE COMPLETE, AS SPECIFIED, WITH ALL FLOATS, ATTACHMENTS, ETC.
- PROVIDE COMPLETE SETS OF SPARE PERMEABLE GEOTEXTILE PANELS, COMPLETE, FOR EACH TURBIDITY CURTAIN. EACH PANEL SHALL BE COMPLETE, AS SPECIFIED, WITH BALLAST CHAIN, LACING ROPES, GROMMETS, CONNECTORS, ETC. SEE TABLE, THIS SHEET FOR LENGTHS OF PERMEABLE CURTAIN PANELS.
- PROVIDE FIFTY FEET OF CHAIN AND FLOATS AS SPARE FOR THE PURPOSE OF ATTACHING THE BOOM TO THE EAST SIDE BULKHEADS.
- PROVIDE TWO (2) SPARE CARRIAGE ASSEMBLIES FOR THE BULKHEAD RISERS, COMPLETE, LESS BEAM.
- PROVIDE SIX(6) SPARE BUOY/ANCHOR ASSEMBLIES TO BE INSTALLED AS REQUIRED TO SECURE BOOMS

7.MAINTENANCE AND REPAIRS

- PROVIDE WEEKLY INSPECTIONS (MAXIMUM 20 DAYS) AND REPAIRS OVER A SIX (6) MONTH PERIOD FROM THE INSTALLATION OF THE TURBIDITY CURTAINS.
- MAINTAIN AND SERVICE MARKER LIGHTS.
- REMOVE AND DISPOSE OF BOTH TURBIDITY CURTAINS, BOOMS, PERMEABLE SKIRTS, CHAINS, ANCHORS, BUOYS, BULKHEAD RISERS, LIGHTS, ETC. UPON COMPLETION AND AS DIRECTED BY THE CITY.



BUOY/ANCHOR ASSEMBLY

N.T.S.

NOTE: PROVIDE BUOY/ANCHOR ASSEMBLIES IN PAIRS SYMMETRICAL ABOUT BOOM

LINE AND CHAIN SIZES

APPROXIMATE ANCHOR WEIGHT	7' POLY TETHER LINE	NYLON ANCHOR, PENDANT, AND CROWN LINE	ANCHOR CHAIN SIZE	NYLON BULK LINE LENGTH GRAND TOTAL
65 LB.	3/4"	3/4"	1/2"	3 x WATER DEPTH

EFFECTIVE LENGTH OF PERMEABLE CURTAINS

SACKETT / DEGRAU						
	PANEL 1	PANEL 2	PANEL 3	PANEL 4	PANEL 5	PANEL 6
SET 1	8'-6"	5'-6"	4'-6"	4'-6"	3'-6"	3'-0"
SET 2	7'-0"	4'-0"	3'-0"	3'-0"	2'-0"	1'-6"
SET 3	5'-0"	2'-0"	1'-0"	1'-0"	1'-0"	1'-0"

UNION / SACKETT					
	PANEL 1	PANEL 2	PANEL 3	PANEL 4	PANEL 5
SET 1	8'-6"	7'-6"	6'-6"	5'-6"	5'-6"
SET 2	7'-0"	6'-0"	5'-0"	4'-0"	4'-0"
SET 3	5'-0"	4'-0"	3'-0"	2'-0"	2'-0"

NOTES:

1. PROVIDE THREE (3) SETS OF PERMEABLE CURTAIN PANELS FOR EACH TURBIDITY CURTAIN.
2. EFFECTIVE LENGTH OF PERMEABLE CURTAINS MEASURED FROM LOWER EDGE OF PERMANENT BOOM. EFFECTIVE LENGTH INCLUDES CHAIN POCKET.
3. SET 1 CURTAIN LENGTHS AS PER PROFILES. SET 2 AND SET 3 PROVIDED AS SPARES.
4. INSTALL SET 3 PANELS FOR INITIAL INSTALLATION. SETS 1 AND 2 PROVIDED AS SPARES.

				DESIGNED <u>E.J.R.</u>		SCALE 		APPROVED FOR THE CITY OF NEW YORK		CITY OF NEW YORK DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF ENGINEERING DESIGN AND CONSTRUCTION DIVISION OF WASTEWATER AND WATER INFRASTRUCTURE AND SUPPORT CAPITAL PROJECT WP-169 CITY WIDE CSO FACILITIES	CONTRACT NO. CSO-GC-G GOWANUS FACILITIES UPGRADE FLUSHING TUNNEL PUMPING SYSTEM SEDIMENT CONTROL DETAILS MECHANICAL	DATE <u>NOV. 2013</u>
				DRAWN <u>L.V.G.</u>				SHEET <u>XX</u> OF <u>XX</u>				
				CHECKED <u>M.M.</u>				DWG. NO. <u>M-9D</u>				
				ENGINEER <u>G.M.B.</u>								
	11/15/2013	DSDC 50R1	EJR	GROUP LEADER <u>D.F.K.</u>				DENZIL TAFFE, P.E. Executive Project Manager				
	11/7/2013	DSDC 50R	EJR					KEVIN CLARKE, P.E. Chief-Division Of Wastewater And Water Infrastructure And Support				
	11/4/2013	DSDC 50	EJR									
NO.	DATE	REVISION	BY									